

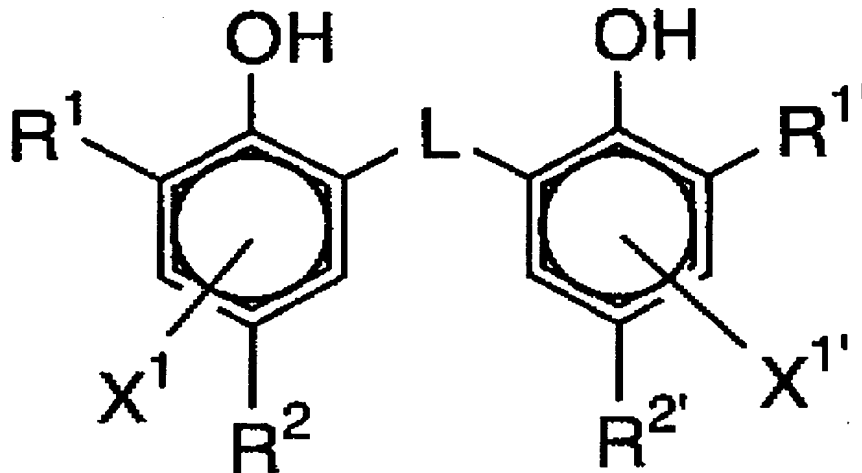
**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. A photothermographic material comprising a photosensitive silver halide, a non-photosensitive organic silver salt, a reducing agent, and a binder on at least one surface of a support, wherein silver iodide is contained in the photosensitive silver halide in an amount of 40 % to 100 % by mole, and the reducing agent contains a compound represented by the following formula (R-1):

Formula (R-1)

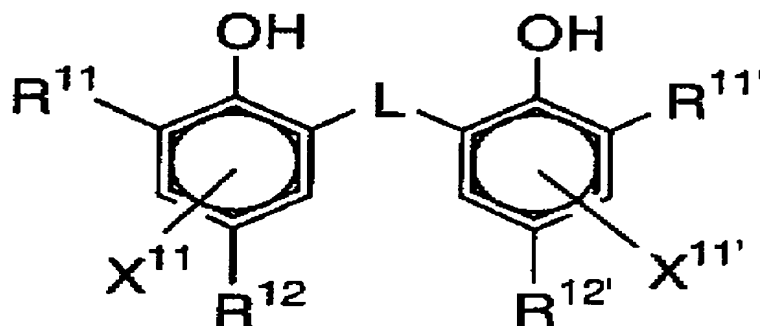


wherein R<sup>1</sup> and R<sup>1'</sup> each independently represent an alkyl group having 3 to 20 carbon atoms, in which a carbon atom bonding to the benzene ring is secondary or tertiary; R<sup>2</sup>

and  $R^{2'}$  each represent a methyl group; L represents an  $-S-$  group or a  $-CHR^3-$  group, in which  $R^3$  represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms; and  $X^1$  and  $X^{1'}$  each independently represent a hydrogen atom or a group capable of being substituted on the benzene ring; and

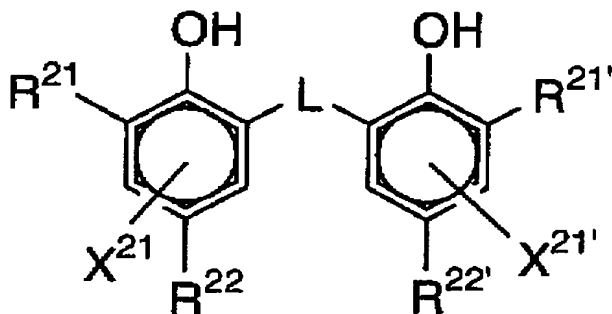
the reducing agent includes a second compound selected from formula (R-2) or from formula (R-3)

Formula (R-2)



wherein  $R^{11}$  and  $R^{11'}$  each independently represent an alkyl group having 3 to 20 carbon atoms, in which a carbon atom bonding to the benzene ring is secondary or tertiary;  $R^{12}$  and  $R^{12'}$  each independently represent an alkyl group having 2 to 20 carbon atoms; L represents an  $-S-$  group or a  $-CHR^{13}-$  group, in which  $R^{13}$  represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms; and  $X^{11}$  and  $X^{11'}$  each independently represent a hydrogen atom or a group capable of being substituted on the benzene ring;

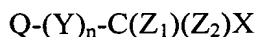
Formula (R-3)



wherein R<sup>21</sup> and R<sup>21</sup>' each independently represent a methyl group or an alkyl group having 2 to 20 carbon atoms, in which a carbon atom bonding to the benzene ring is primary; R<sup>22</sup> and R<sup>22</sup>' each independently represent an alkyl group having 1 to 20 carbon atoms; L represents an -S- group or a -CHR<sup>23</sup>- group, in which R<sup>23</sup> represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms; and X<sup>21</sup> and X<sup>21</sup>' each independently represent a hydrogen atom or a group capable of being substituted on the benzene ring.

2. The photothermographic material of claim 1, further comprising a compound represented by the following formula (H):

Formula (H)



wherein Q represents an alkyl group, an aryl group, or a heterocyclic group; Y represents

a divalent connecting group; n represents 0 or 1; Z<sub>1</sub> and Z<sub>2</sub> each represent a halogen atom; and X represents a hydrogen atom or an electron withdrawing group.

3. The photothermographic material of claim 1, wherein the silver iodide is contained in the photosensitive silver halide in an amount of 90 % to 100 % by mole.

4. The photothermographic material of claim 1, wherein the photosensitive silver halide has a mean grain size of 5 nm to 80 nm.

5. The photothermographic material of claim 1, wherein the photosensitive silver halide has a mean grain size of 5 nm to 40 nm.

6. (cancelled)

7. (cancelled)

8. The photothermographic material of claim 1, which is exposed with laser light.

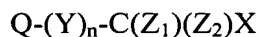
9. The photothermographic material of claim 8, wherein the laser light has a light emission peak intensity in a range of 390 nm to 430 nm.

10. The photothermographic material of claim 1, wherein a characteristic

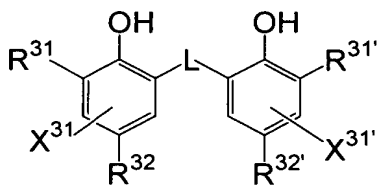
curve of the photothermographic material has a gamma in a range of 2 to 5.

11. A photothermographic material comprising at least one photosensitive silver halide, a non-photosensitive organic silver salt, a reducing agent, and a binder on a surface of a support, wherein silver iodide is contained in the photosensitive silver halide in an amount of 40 % to 100 % by mole, the reducing agent contains a compound represented by the following formula (R-4), and a compound represented by the following formula (H) is contained in the photothermographic material with a molar ratio of the compound represented by formula (H) to the compound represented by formula (R-4) being 0.2 or greater:

Formula (H)



Formula (R-4)



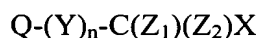
wherein, in formula (H), Q represents an alkyl group, an aryl group, or a heterocyclic group; Y represents a divalent connecting group; n represents 0 or 1; Z<sub>1</sub> and

Z<sub>2</sub> each represent a halogen atom; and X represents a hydrogen atom or an electron withdrawing group, and

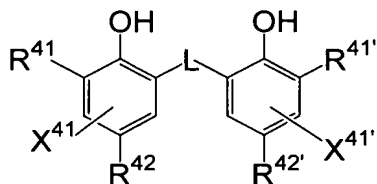
wherein, in formula (R-4), R<sup>31</sup> and R<sup>31'</sup> each independently represent an alkyl group having 1 to 20 carbon atoms; R<sup>32</sup> and R<sup>32'</sup> each independently represent an alkyl group having 2 to 20 carbon atoms; L represents an -S- group or a -CHR<sup>33</sup>- group, in which R<sup>33</sup> represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms; and X<sup>31</sup> and X<sup>31'</sup> each independently represent a hydrogen atom or a group capable of being substituted on the benzene ring.

12. A photothermographic material comprising at least one photosensitive silver halide, a non-photosensitive organic silver salt, a reducing agent, and a binder on a surface of a support, wherein silver iodide is contained in the photosensitive silver halide in an amount of 40 % to 100 % by mole, the reducing agent contains a compound represented by the following formula (R-5), and a compound represented by the following formula (H) is contained in the photothermographic material with a molar ratio of the compound represented by formula (H) to the compound represented by formula (R-5) being 0.15 or greater:

Formula (H)



Formula (R-5)



wherein, in formula (H), Q represents an alkyl group, an aryl group, or a heterocyclic group; Y represents a divalent connecting group; n represents 0 or 1; Z<sub>1</sub> and Z<sub>2</sub> each represent a halogen atom; and X represents a hydrogen atom or an electron withdrawing group, and

wherein, in formula (R-5), R<sup>41</sup> and R<sup>41'</sup> each independently represent a methyl group or an alkyl group having 2 to 20 carbon atoms, in which a carbon atom bonding to the benzene ring is primary; R<sup>42</sup> and R<sup>42'</sup> each independently represent a hydrogen atom or a group capable of being substituted on the benzene ring; L represents an -S- group or a -CHR<sup>43</sup>- group, in which R<sup>43</sup> represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms; and X<sup>41</sup> and X<sup>41'</sup> each independently represent a hydrogen atom or a group capable of being substituted on the benzene ring.

13. The photothermographic material of claim 11, wherein in formula (R-4), R<sup>31</sup> and R<sup>31'</sup> each represent a secondary or tertiary alkyl group having 3 to 15 carbon atoms.

14. The photothermographic material of claim 12, wherein in formula (H), Q represents a heterocyclic group containing a nitrogen atom as a ring-constituting atom

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and not containing a sulfur atom.

15. The photothermographic material of claim 11, wherein an average content of the silver iodide in the photosensitive silver halide is 90 % to 100 % by mole.

16. The photothermographic material of claim 11, further comprising a development accelerator.

17. The photothermographic material of claim 11, which is exposed with light having a peak intensity in a range of 350 nm to 450 nm at an intensity of illumination of 1 mW/mm<sup>2</sup> or more.

18. The photothermographic material of claim 11, which is exposed by a semiconductor laser having a light emission peak intensity in a range of 390 nm to 430 nm.

19. The photothermographic material of claim 11, wherein a characteristic curve of the photothermographic material has a gamma in a range of 2 to 5.